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THE USE OF THE TERM *FUNCTION* IN ENGLISH TEXTBOOKS OF PSYCHOLOGY¹

By CHRISTIAN A. RUCKMICH, Cornell University.

Problem.—A number of English textbooks which attempt to present the subject-matter, point of view, and problems of psychology to the college student, frequently use the word 'function' in connection with the description of phenomena of the mental life. It is conceivable that some systematic classification of the meaning of this term as so used could be made from a detailed study and review of these textbooks, and it is likely that a classification, made in this manner, may be of service in comprehending the angle from which mind, in each one of these textbooks, is sighted. Accordingly, with a view toward reaching a sort of logical schema of 'function,' and with an attempt to clear up, in a measure, the conceptions of mind held by these various authorities, an analytical investigation of fifteen textbooks, best representative of the class mentioned, was begun.

Textbooks reviewed.—The textbooks chosen for this investigation were the following:

- (1) Angell, J. R. *Psychology*, New York, 4th ed., 1908, ix + 468.
- (2) Baldwin, J. M. *Elements of Psychology*, New York, 1893, xiv + 372.
- (3) Calkins, M. W. *A First Book in Psychology*, New York, 3rd ed., 1912, xix + 426.
- (4) Dunlap, K. *A System of Psychology*, New York, 1912, xiv + 368.
- (5) James, W. *Psychology*, New York, 1907, xiii + 478.
- (6) Judd, C. H. *Psychology*, New York, 1907, xii + 389.
- (7) Ladd, G. T., and Woodworth, R. S. *Elements of Physiological Psychology*, New York, 1911, xix + 704.

¹ Revised from a paper read before the Graduate Seminary in Psychology, Cornell University, March 25, 1912.

(8) McDougall, W. *Psychology*, New York and London, 1912, 256.

(9) Myers, C. S. *A Textbook of Experimental Psychology*, 2 vol., Cambridge and New York, 2nd ed., 1911, xiv + 344, 107.

(10) Pillsbury, W. B. *The Essentials of Psychology*, New York, 1911, ix + 362.

(11) Read, M. S. *An Introductory Psychology*, New York, 1911, viii + 305.

(12) Stout, G. F. *The Groundwork of Psychology*, New York, 1903, vii + 248.

(13) Thorndike, E. L. *The Elements of Psychology*, New York, 1905, xiii + 351.

(14) Titchener, E. B. *A Textbook of Psychology*, New York, 1909-10, xvi + vii + 558.

(15) Yerkes, R. M. *Introduction to Psychology*, New York, 1911, xii + 427.

Classification of Usage.—After a detailed study of the usage of the term ‘function’ in the English textbooks of psychology, a systematisation based on coincidences of meaning seemed logically possible. Difficulties arose in the interpretation of usage from the point of view of the context and, sometimes, of the system. As a rule, very little margin was allowed for interpretation in the light of the system because of the danger of erroneous construction. It is hardly fair to the student or to the critic for an author to postulate general systematic points of view at the beginning of the presentation in a textbook and to commit breaches of promise from that point on. The author was, accordingly, held responsible for local renderings, in spite of the fact that he may have warned the reader not to pay heed to lapses or misuses of language.

Aside from the borrowed use of the word ‘function’ in the technical sense of mathematics,² which, for the purposes of this paper, is disregarded in our tabular arrangement, we find that, in the main, ‘function’ is used in two large ways, the first of which is subdivided as follows:

² This meaning is defined by the Century dictionary: “A mathematical quantity whose value depends upon the values of other quantities called the arguments of independent variables of the function; a mathematical quantity whose changes of value depend on those of other quantities called its variables.”

<i>Meaning</i>	<i>End or Purpose</i>	<i>Relation</i>
(I) Service	(A) other { process or processes function or functions }	organised
	(B) the total organism	{ (1) defensive (2) offensive
(II) Activity	activity	active

This logical classification will become clearer as we proceed with the examples that contributed to its foundation. We find, in general, that, with the exception noted above,—in the instance of the technical mathematical meaning,—every occurrence of the word ‘function’ in the literature means either ‘service’ or ‘activity,’ or the approximate grammatical equivalent of either one of these. That is to say, for every appearance of the term ‘function,’ the one or the other of these words, or the corresponding grammatical form of the one or the other of these words, can be substituted in the text without a marked distortion of the original meaning, or a misconstruction of the sentence. The determination of the ‘end’ or ‘purpose’ of the ‘function,’ and the type of its ‘relation,’ is based on explicit or, more rarely, implicit connotations interpreted from the context. The ‘relation’ is the aspect in which the ‘function’ appears.

A ‘function’ of the type I-A is by nature of service to other ‘functions’ or processes and stands in an organised relation to them; it may further, complete, or achieve one or more ‘functions’ or processes within the organism, but its immediate end is not that organism. Its purpose is to make possible the successful operation of other ‘functions’ or processes dependent on it. Examples of this type follow:

The function of the central nervous system is to control and combine the various processes which go on in different parts of the organism.³

The effort by which he succeeds in keeping the right *name* unwaveringly present to his mind proves to be his saving moral act. Everywhere, then, the function of the effort is the same: to keep affirming and adopting a thought which, if left to itself, would slip away.⁴

There are always resistances inhibiting the carrying out of the ‘determination,’ and it is the function of the specific act of willing persistently to re-inforce the determination.⁵

³ McDougall, W. *op. cit.*, 26.

⁴ James, W. *op. cit.*, 454.

⁵ Myers, C. S. *op. cit.* 332.

The formation of the elements of the process of knowledge and the inauguration of the control over movements in accordance with the mandates of experience—these are the two great functions of perceptions.⁶

Because association is of wider interest than its function in recall, we shall give it a chapter by itself. Association is the organization of experience, by virtue of which the various kinds and parts of content constitute a whole; it is the functional interconnection of the objects of experience as we find them; not a force or activity. . . . The function of the concept in perception is sometimes called apperception.⁷

In general, it may be said that attention increases the vividness of presentative states and thus renders more definite and lasting the apperceptive activities of synthesis, analysis, relation, as seen in memory, association, judgment, and reasoning It may at least be safely said that the arranging and co-ordinating power of voluntary attention greatly facilitates our earliest intuition of things. It is here that the relating or apperceiving function of active attention is most apparent.⁸

In a 'function' of the type I-B, we find an expressed reference to the interests of the total organism in and for which the 'function' exists. This kind of 'function' does something for the individual organism as distinguished from other organisms or from the environment at large. The 'function' may, under these circumstances, further the interests of the individual in protection from other organisms, or it may do this for the individual in opposition to other organisms or objects of experience. The distinction attempted is that of defense *versus* offense. In other words, the organism may strive, with the aid of various 'functions,' either to defend itself against its environment, or to express, assert, or advance its interests in its environment. The defensive attitude or relation is by far the more common, while the assertive or expressive relation occurs systematically in the textbooks of only a few authors. The former relation is styled I-B-I, and is best illustrated by the following selections:

Such differences certainly appear to be fundamental; but we shall see reason to modify this view, when we consider that both forms of attention are vital functions which are brought out and developed in the general adaptive reaction of the organism to its social and physical surroundings. If we remember that those objects which are harmful to us commonly stimulate the nerves very violently, we shall begin to see how in the general economy of the organism it may be useful to have our senses so constructed that they shall call our attention to such possible sources of danger as are represented by

⁶ Angell, J. R. *op. cit.* 171.

⁷ Dunlap, K. *op. cit.* 179, 198.

⁸ Baldwin, J. M. *op. cit.*, 71, 124.

these intense stimuli, even when we do not consciously desire to have our quiet thus invaded.⁹

In summary it may be said that instincts are movements, or feelings that may or may not be the result of movements, that come because of inherited connections and dispositions in the nervous system. In function they serve, on the one hand, to keep the infant alive until he may be able to learn for himself, on the other they serve to enforce general lines of conduct that are essential for the preservation of the individual, the race, and the social group.¹⁰

Reference has already been made to the main function or use of sensations in the conscious life of the organism, namely to furnish the material to be developed into perceptions and ideas for the guidance of the organism in making superior adjustments to the conditions of its life, conditions physical, social, and spiritual.¹¹

Regarded from the biological point of view, the function of all mental process and mental structure is to preserve and promote the life of the race and that of the individual in so far as he subserves the life of the race All mental activity, then, normally issues in bodily movement; since only by promoting and guiding bodily movement can it fulfill its function.¹²

'Function' of type I-B-2 is very rare. It has the same biological significance as has I-B-1, but it carries with it more of the idea of self-aggression, the expression of an individuality, the assertion of the *ego* over against its environment. Examples of this type are:

The organism is from the first, as we have seen, an active affair, instinctly and impulsively adjusting itself to its environment and using that environment for its purposes [Under 'Function of imagination']. In answer to the question, then, why we imagine, we may say (1) because images enable us to carry on our lives in much more advantageous ways than would be the case without the aid of imagery; and (2) because we simply can not help doing so, there being within us deep-set impulsive tendencies which find in great measure their adequate and satisfactory expression in images.¹³

The chief function of reasoning is to make discoveries, to carry us beyond the limit set to observation, memory, and the simpler forms of thought. Reasoning is thus an important form of self-development, or learning, a means of acquiring new outlooks, new points of view, new bases for action.¹⁴

As a final type of 'function,' we have an activity whose purpose is its own acting and whose sole aspect is an active relation to the organised system: the assigned task of the 'function' is an end in itself. We should say, for instance, under this heading, that the 'function' of blood-circulation

⁹ Angell, J. R. *op. cit.*, 91.

¹⁰ Pillsbury, W. B. *op. cit.*, 256.

¹¹ Read, M. S. *op. cit.*, 106, 107.

¹² McDougall, W. *op. cit.*, 105.

¹³ Read, M. S. *op. cit.*, 86, 216.

¹⁴ Calkins, M. W. *op. cit.*, 163; *v.* also 274-77.

is not to act as carrier of nutriment to the tissues, but to circulate. Stout puts it tersely in the statement:

When we say that digestion is a function of the stomach, we mean that digestion is the stomach engaged in digesting. When we say that breathing is a function of the lungs, we mean that breathing is the lungs at work.¹⁵

Further illustrations of this type follow:

The organism is a whole. It possesses a certain *form*, changing from moment to moment; it exhibits manifold *functions* or activities, it also possesses *experiences*.¹⁶

To speak, then, of consciousness and to attempt to describe consciousness as something that exists and can be analysed into constituent parts which severally exist, abstracting from or neglecting the mental activity or function, is to distort the facts very seriously and to use a method which cannot be wholly successful.¹⁷

If the free endings of the epidermis are not organs of pain, the physiological evidence for the connection of pain with unpleasantness falls to the ground. If they are, it is still possible that their exposed position and consequent liability to injury allow them to function as sense-organs, while they are replaced in the interior of the body by more highly specialised structures; or it is possible that they have become adapted, in some unknown way, to the reception of sensory stimuli.¹⁸

It is true that a large part of habit is ideational; the bodily functions are influenced by the processes in representative consciousness.¹⁹

These are some of the more frequent and apt occurrences of the use of this form of the term 'function.' It now remains to trace out the appearance of the term in every one of the several textbooks reviewed for this purpose.

ANGELL (1). In this textbook, we find frequent usage of this term, and in almost all of its meanings. Out of over one hundred appearances, there are about fifty whose meaning places them under rubric I-A of our classification, *i.e.*, 'function' used in this sense has as its end the furtherance of some other process or 'function' in the organism. It is only fair to state, however, that in a large number of these instances the word is applied to physiological rather than to psychological processes; but the term is by no means restricted to physiological usage as the following citations will indicate:

¹⁵ Stout, G. F. *Manual of Psychology*, New York, 1907, 49.

¹⁶ Yerkes, R. M. *op. cit.*, 341.

¹⁷ McDougall, W. *op. cit.*, 59.

¹⁸ Titchener, E. B. *op. cit.*, 261.

¹⁹ Dunlap, K. *op. cit.*, 334.

The neurones of the central (nervous) system may be grouped according to certain of their functions in three great divisions: (1) sensory neurones which bring nervous impulses in from the sense organs, (2) motor neurones which terminate in muscles and carry to them impulses from the nervous centers, and (3) central neurones which in various ways join together the members of the first two groups. As we remarked earlier in the chapter, the nervous system seems to manifest its essential value as a device whereby appropriate movements are made in response to sensory stimulations. [p. 27.]

The function of the peripheral neurones is evidently that of transmitting impulses from the sense-organs into the nervous centers, and we need discuss them no further at this point. [p. 32.]

Each of these cases illustrates the function of the sensory-motor circuit. The light rays falling upon the retina set up currents in sensory nerves, which are transmitted to cells in control of the muscles of the eyes; and these cells in turn send out impulses, which result in convergence and accommodation. [p. 100.]

From the physiological side it is evident that the primary organic function of the sensory processes must be that of instigating movements. [p. 148.]

The formation of the elements of the process of knowledge and the inauguration of the control over movements in accordance with the mandates of experience—these are the two great functions of perception. [p. 170.]

Of the subject side of consciousness it seems impossible to predicate anything save its existence. Its *function*, to be sure, must apparently remain fixed. It must always be the *knower annealing* the various elements of our experience into some sort of unity. [p. 443.]

Taken in their entirety, what do these two great bodies of fact point to, regarding the *function* of emotion, *i.e.*, (1) the temporary suspension of voluntary control in the forward movement of consciousness, and (2) the overflow of motor impulses into channels leading partly to the involuntary muscles and partly through hereditary influences to the voluntary system? *The significance of emotion as a fact of consciousness would seem, therefore, to be resident in this monitory function, represented by its compelling announcement of needed adjustments, its report of unstable equilibrium.* [p. 378.]

As we saw long since, all such expansive states of consciousness are, other things equal, intrinsically agreeable, and they afford a definite appeal to the accommodatory function of attention. [p. 425.]

There are a few instances, less than a quarter of the total number of occurrences of the term, which imply pure activity, of type II in our schema, without apparent reference to any end outside of the activity. It is extremely difficult to distinguish, at times, between the meaning just illustrated, and the meaning of bare activity; but it is possible to give enough examples of the latter meaning to justify the distinction.

It may be said that however true our account of the organic activities involved in emotional psychoses, it is, nevertheless, a false description of the facts to say that we are *conscious* in any *explicit* way of these functions of our bodily selves. [p. 372.]

Furthermore, the grasping of the object, involving as it does a definite motor coördination of an efficient kind, is *per se* agreeable, *i. e.*, it is a normal activity of functions (in this sense instinctive) adequate to the demands laid upon them. [p. 407.]

Psychologists are by no means agreed as to the precise nature of the mental activity by means by which we apprehend relations. Certain writers make the whole achievement a function of attention, and disclaim the necessity for any further explanation. [p. 248.]

The remaining occurrences of the word 'function' are classifiable under I-B-1, *i. e.*, they refer to the organism as an end and bear the interpretation of service to that organism. Clearly the interests of the organism seem to be indirectly subserved in many other cases; some of the quotations given have connotations of that kind. In fact, if a reviewer is entitled to a general impression of the textbook, he does not hesitate to say that there appears to be an undercurrent of meaning of the 'survival' type in almost all of the uses found. All that this means is that 'function' in almost every connection subserves directly or indirectly the ends of the organism as a whole, *i. e.*, helps it to survive in a hostile, or at least, in a difficult, environment. Unambiguous statements to this effect follow:

It will assist us in gaining a working idea of the nervous system to bear in mind the fact that its fundamental function consists in the conversion of incoming nerve impulses into outgoing nerve impulses causing movements tending to preserve the creature. [p. 16.]

We announced our purpose at the outset to adopt a biological point of view [*sic*] in our psychological study, and to attempt at every step to see just how the mind aids in the adjustment of the human being to the environment. If we turn from the merely general statement that the fundamental function of consciousness is to better such adaptive activities, and observe any specific instances of the process of adaptation itself, we shall always find that the actual work of accommodation is going on at the point which we call the point of attention. [p. 80.]

The function of the unpleasant in consciousness is, then, evidently to furnish an *immediate and unambiguous index of conditions which menace the welfare of the organism*. . . . The obvious function of agreeableness is consequently found in the *furnishing of immediate exponents of organic welfare*. [p. 327.]

They (instincts) represent, by common consent, those forms of reaction upon the environment which the race has found most effective in maintaining itself against the rigours of climate and geographical habitat, and against the assaults of various forms of animal life. [p. 345.]

Apparently, then, by the specific admission made in one of the above quotations, mind, for Angell, is almost entirely biological in regard to the organism. All three meanings of the word 'function,' however, are noted.

BALDWIN (2). In this text we find a more frequent usage of the word 'function' than we did in Angell; but its use is confined almost entirely to rubrics I-A and II, and is distributed almost evenly between them. Only three occurrences of I-B-I were found; a single illustration of this use will, therefore, suffice:

The analogy, therefore, may be put something like this: the nervous system in its development has taken on the two functions called stimulation and reaction. When consciousness arises it is at least—whatever else it be—an aid through pleasure and pain to the life process, and to the further development of the system. Analogy would lead us to look, therefore, for this new factor in connection with each of the two essential nervous functions, stimulation and reaction. [p. 309.]

It follows that most of the appearances of the word do not come in contexts which would indicate a use of the term with reference to the survival of the organism. Baldwin, for the most part, has not written the textbook considered from a biological point of view. The trend of the book, taken as a whole, is toward a physiological description of mind, not as a matter of nerve-tissue conveying nerve-impulses, but as doing something mental and non-physiological but in a physiological manner. The most frequent usages come under this aspect. Sometimes the activity has an end outside of its own acting; in this case the word comes, of course, under I-A as the following:

For it should be remembered that we must find a mechanical basis for muscular control even though we advocate a directive and selective function of will. [p. 43.]

It may at least be safely said that the arranging and coördinating power of voluntary attention greatly facilitates our earliest intuition of things. It is here that the relating or apperceiving function of active attention is most apparent. [p. 124.]

In one instance 'function' as used in the sense of I-A passes in meaning to I-B-I:

Whatever directly causes me *pleasure or pain* excites interest. Here the reference to self is so immediate that the knowing function which the attention brings with it is simply a self-preserving function. I am interested in pain to discover the cause and remove it, and in pleasure to understand and continue it. This is what pleasure and pain are for, to warn and advise; and to say they interest us is to say that they carry this function into the life of thought. [p. 246.]

Lastly there are types of 'function' which are classifiable under our rubric II:

It has already been seen that all mental activities reside, that all apperceptive processes happen, in the attention; hence the great class of emotions of activity cluster round the different phases of the attentive life. These feelings again fall into two classes, which we may call feelings of degree of adjustment and feelings of *function*, or activity proper. [p. 267.]

We are now prepared to gain a view of the entire process of imagination looked at, not as the union of these separate activities or factors, but as what appears at first sight to be, a single function of the mind. [p. 187.]

Under this head, also, as including any function, and not simply muscular activity, the pleasures arising from the gratification of the organic appetites and instincts appear to fall, they are functions of periodical exercise, and their normal working involves periodical stimulation. [p. 233.]

The general impression got from this book is the conception of mind as an active organ. If the point that mind is considered as contrasted with, and not as a part of, the physiological apparatus of the organism, is well established, then there is no danger of misinterpreting the statement that, in this book, mind is viewed from a physiological angle: it acts as a non-physiological organ in the organism, but it acts in a physiological way, *i. e.*, it works within the confines of an organised whole.

CALKINS (3). In this book the occurrence of the term is comparatively rare. Out of the 25 appearances, about one-half have physiological references, and some of the remaining relate to non-psychical phenomena. But the book is important for our discussion in its attitude toward the functioning of a 'self' aggressive to its environment in the light of self-development. We have already quoted one passage in illustration of the rubric I-B-2.²⁰ The conception noted, however, does not emerge so much in the use of the term itself, as it does in connection with the context appearing with the term. In the following example it is difficult to decide whether the meaning of the term 'function' is classifiable under 'service' with other processes as an end, or with the organism in its aggressive attitude as an end, *viz.* I-A, or I-B-2. The context probably settles the matter in favor of the latter (I-B-2):

The functions of the imagination are by this time evident. By reproductive imagination, or memory, I hold to my past; and in creative imagination I reach out also beyond the limits of past and present. As a merely perceiving self I am bound to this desk, this loom, this plot of ground; but as a remembering self I live through, once more, the exhilarating adventures and the beautiful scenes of

²⁰ *V.* page 103.

my past experience, and as a creatively imagining self I am hampered neither by 'now' nor by 'then.' [p. 125.]

In a discussion of *psychology as science of mental function*, an attempt is made to vindicate the use of the term 'function' in the aspect and meaning of I-B-2. In it appears the following:

If the term 'function' be taken with the meaning 'reaction to environment' and if the environment be then described, in Professor Angell's words, as 'social' and not merely 'physical,' it must follow that a 'function' is a social relation,—in other words, a personal attitude. If, on the other hand, the term 'function' be taken in a strictly biological sense, then the account of different sorts of consciousness as different reactions to environment, . . . these accounts will explain and classify mental phenomena, but will in no sense describe them psychologically. . . . The classification of a psychological experience as biologically useful is both correct and significant, but so far from fulfilling the requirements of psychological analysis, it is not psychological description at all. Such description is, indeed, impossible without the study of a self, in personal relation, emphasised or unemphasised, receptive or assertive, egoistic or altruistic, to an environment which is personal as well as biological. [p. 275.]

Illustrations of the use of the term as described under I-A follow:

Some psychologists hold that the function of redistribution belongs peculiarly to the cell bodies. [p. 288.]

It has already appeared that the function of the lenses and muscles of the eye is the formation of clear images on the retina. [p. 300.]

The meaning given under II also appears occasionally:

It is a moot question whether sense-consciousness accompanies the functioning of these lower and interior centres. The probability, however, is that in the case of the lower vertebrates, with less developed hemispheres, the excitation of lower and of interior brain is accompanied by consciousness, and that, on the contrary, excitation of the hemispheres is necessary to human consciousness. [p. 291.]

On its neural side, dissociation implies what may be described somewhat figuratively, as a blocking of ordinary 'association paths' and a consequent damming up of cortical energy. This results on the one hand in the more intense functioning of the sense centres still excited, and on the other hand in the spread of the cortical energy through less frequently used 'brain paths.' [p. 384.]

Emphasis is laid, then, on the meaning of the term 'function' as given under I-B-2, *i.e.*, it is connected with the conception of the self functioning in a self-developing manner and in a social environment of other selves. The term occurs, however, with other meanings, especially in physiological contexts.

DUNLAP (4). With the exception of the use of the word 'function' in its mathematical sense, all the appearances can be classified under either I-A or II: either the 'function' serves some other process or 'function,' or it simply acts. These meanings are distributed about equally among the thirty appearances of the word. Instances where the 'function' furthers another 'function' or process are the following (I-A):

This approximate repetition of a former content is the *reproductive* function of imagination, and we speak of it simply as *reproductive imagination*. [p. 161.]

The function of the concept in perception is sometimes called *apperception*. [p. 198.]

It is scarcely probable that muscular sensation by itself can give space-content. The only betweenness of such sensation is the temporal betweenness, and its function in the production of space-content can be only secondary. But it does help to develop our space-content in a very important way, [p. 218.]

But there are as many occurrences of the term 'function' with the meaning of activity for its own sake, examples of which are:

Finally, psychology is not the study of the functions of the nervous system. In fact, all the essential points of psychology can be expounded, as they have been developed, without reference to the nervous system, of by reference to a conception thereof which is ridiculously inaccurate. Nevertheless, it is true that psychological principles and facts are more easily described and investigated when referred to the structure and probable activity of the brain and nerves, as understood by the person to whom described or by whom investigated, and we believe that the more closely physiological conceptions approach agreement with the actual facts of structure and function, the more facile the progress of psychology. [p. 4.]

The most conspicuous peculiarity of relation-content is that it has no definitely assignable nervous process corresponding to it. We know of no "center" in the brain for the perception of relations, and we do not know that it is a cortical function at all. We must not suppose that perceived relations depend on, or are functions of "brain-paths," or "association fibres;" brain-paths represent simply connections established between different factors of content, by the operation of which the factors function together; the physiological connection is not the same thing as the experienced connection or relation, and the physiological connection may function perfectly whether a specific relation is experienced or not. [p. 147.]

The actions of which the human body is capable may be divided usefully into two classes: physiological reflexes and conscious reflexes. The first class, which includes the actions in which consciousness plays no essential part, is but indirectly of interest to the psychologist, although of extreme importance in vital function. [p. 265.]

A 'function' may mean, then, a serviceable activity with some other 'function' or process as an end, as often as it

may mean simply an activity of some sort without any definite serviceable direction. Attention must, however, be called to the more frequent use of the word with the first meaning in purely psychological connections and to the more common occurrence of the term in the second sense in purely physiological contexts.

JAMES (5). The meaning of 'function' in this book is limited to the two mentioned in connection with the review of the last book, and, out of the 25 occurrences, the majority are classifiable under the meaning of 'service' with other processes of 'functions' as an end. We find good illustrations of the meaning corresponding to our heading I-A in the following:

Sensation, thus considered, differs from perception only in the extreme simplicity of its object or content. Its object, being a simple quality, is sensibly *homogeneous*; and its function is that of mere *acquaintance* with this homogeneous seeming fact. Perception's function, on the other hand, is that of knowing something *about* the fact. [p. 14.]

The chief function of our eyes and ears is to enable us to prepare ourselves for contact with approaching bodies, or to ward such contact off. They have accordingly been characterized as organs of anticipatory touch. [p. 61.]

If we then consider the *cognitive function* of different states of mind, we may feel assured that the difference between those that are mere 'acquaintance' and those that are 'knowledges-*about*' is reducible almost entirely to the absence or presence of psychic fringes or overtones. [p. 167.]

'Function' as bare activity with no purpose other than its own acting occurs much more rarely. One example may, therefore, be sufficient:

If paths are shot-through at all, they are shot-through in consistent systems, and occasion thoughts of definite objects, not mere hodge-podges of elements. Even where the brain's functions are half thrown out of gear, as in aphasia or dropping asleep, this law of figured consciousness holds good. [p. 316.]

The most frequent use of the term 'function' occurs with the meaning, therefore, of 'service' especially when placed in a psychological setting. Occasionally, also, the meaning of 'activity for its own sake' appears, but usually only in connection with physiological processes.

JUDD (6). The full tale of meanings of the word 'function' is found in this book, and the word occurs almost as frequently as it does in Angell or Baldwin, *i. e.*, about 80 times. Out of these appearances, there are a few scattered references to the meaning as given in I-B-1, *i. e.*, of 'service'

to the organism in the defensive relation toward its environment; two references to Calkins's 'social function,' our I-B-2; and the remaining references about equally divided, with a slight majority for the meaning of II, *i. e.*, 'activity for its own sake,' over the conception of 'function' as 'service' with other processes or 'functions' as an end,—our I-A. Illustrating these usages in order of notation, we have the following quotations as examples of the last mentioned (I-A):

The function of a sensation can be defined only by considering the use to which the sensation is put. . . . The function which a given sensation serves is not determined merely by the quality or intensity of the sensation; it is determined in a large measure by the relation into which the sensation enters. [p. 131.]

After the memory image is thus aroused, it is used as a percept would be used to guide action, and so becomes an important additional means of controlling behavior. The control of action is the chief function of the memory image. [p. 238.]

The important fact in an idea is thus the relation into which its contents enter. Thus idea is the function of memory factors in much the same sense that perception is the function of sensations. [p. 247.]

Turning now to the quotations which illustrate the meaning of 'function' as 'service' with the organism in its defensive relation toward its environment as an end (I-B-1), we have:

Every highly developed function of an animal is recognized in biology as having its relation to the struggle for existence. . . . With such facts before us can we escape the question, What part does consciousness play in the economy of life? From the lower forms of animal life up to the highest, we find a steady increase in the scope of intelligence. In the highest animals we find mental evolution carried so far that intelligence is very often of more significance than any other single function or even group of functions. [p. 3.]

No better illustration than this could be found of the fact that the development of all experience is in the direction of the perfection of functions. Content is here used for a time to aid in building up a habit and then the content is dropped and the function is retained. The value of memory in such cases as this is merely to enlarge the basis of reaction until the most useful type of reaction can be securely established. [p. 240.]

Two examples of 'function' used in the sense of assertive development in a social environment (I-B-2) appear:

The slightest revival of the memory image is enough to arouse the appropriate activity; that is, the function of the image is gradually selected as the important contribution to individual development, and the content factors drop out more and more. [p. 239.]

The worthy sponsors of the child unquestionably indulged, even in the early days of the ceremony, in certain exchanges of information with regard to other members of the community, and this social function which the individual served was very readily connected with the word coined to refer primarily to the religious function. [p. 265.]

The illustrations of the last type of 'function' used, *i. e.*, that of 'activity' with its own acting as an end (II), are:

Between the function of movement as exhibited in this simplest form and the same function as exhibited in the highest animals, there is a long course of development, but this development consists solely in differentiation of movements, in refinement of adjustment and organization, not in the production of a wholly new fact of life. [p. 16.]

For example, there is in this parietal region one area which is of extreme importance in the function of speech. . . . He may be capable of articulation, which is a motor function, but he will lack the ability to interpret the impressions when he sees or hears words or to give expression to a coherent series of ideas. [pp. 54-5.]

Why should this group of animals turn to the development of all the instruments of civilization? The problem stated in this form becomes a problem of functional development, rather than a problem of physical development. The animal must have been driven at some time into a situation where his development turned upon his ability to adopt a new type of behavior and a new mode of life. [pp. 366-7.]

To sum up: while we find in Judd a small numerical majority in favor of the meaning of 'activity,' it must be noted that 'function' thus used appears, for the most part, in physiological contexts (in direct opposition to the tendencies manifested in Angell and Baldwin). The meaning of 'service,' on the other hand, applies more directly to psychological usage. In spite of the confessedly biological nature of some of the quotations given, we find that the psychological treatment of the data of human experience as given in the book, especially in connection with the usage of 'function' in the sense of 'service' with other processes as an end (I-A), leans heavily on the biological point of view, an aspect which colors the entire presentation, and stands, as it were, behind the scenes ready to prompt the actor in an emergency.

LADD and WOODWORTH (7). In this work 'function' is consistently limited to the meaning of 'activity' (II). Consciousness is apparently conceived from a physiological point of view. The word occurs very frequently, beginning with the chapters on the nervous system and passing on through the chapters in which psychical phenomena are correlated with 'brain activities.' This conception holds throughout and is instanced by the following example:

Consciousness may reasonably be taken as indicating brain activity; in other words, when there is consciousness, then the brain is active. And degrees of consciousness may probably be taken as indicative of degrees of brain activity. The field of attention may therefore be taken as an index of the field of greatest brain activity. [p. 609.]

We are several times greeted with the word, 'faculties,' a term which has not yet dropped out of the psychological vocabulary of several well-known psychologists:²¹

Besides the foregoing groups, or classes, certain observations which have more or less of scientific confirmation and value, may be made regarding the physical basis of the feelings and volitions controlling the bodily members, and of the higher faculties of memory, association of ideas, etc. [p. 7.]

Several illustrations of 'function' used as 'activity' follow:

He [Flechsig] believes that the map of the cortex so obtained is also to be regarded as a map of the distribution of functions; and in particular he supposes that the regions whose fibres receive their myelin sheath early are the centres of the lower functions of sensation and movement, while the late-myelinating regions are the seat of the highest intellectual functions. [p. 224.]

In a word: *It may be possible, by training, to increase the speed and improve the quality of those general cerebral forms of functioning, to which attention and discrimination correspond from the introspective point of view. . . .* We pass now to a study of that complex form of functioning which is called "memory," in a more special meaning of the word. [p. 572.]

There is so very little variation in the meaning of the term 'function,' although occasionally it gets biological significance from the context, that, once having noted what kind of a psychology the authors set out to write, little is left to be indicated in the review save the fact that we have here a consistently physiological presentation of consciousness.

McDOUGALL (8). In this little book the term 'function' occurs over 40 times, but, again, as in the case of Ladd and Woodworth, except for a very few cases, with a uniformity of meaning. The meaning assigned, appears under our II, *viz.* that of 'activity' for its own end. After considering the various methods of psychological description, 'faculty' psychology, linked associations, physiological psychology, the author goes on to say:

We have already approved of the method of describing mental process which consists in speaking of it as the activity of a subject; but instead of saying that the subject exercises these activities about ideas, we agreed to say that the subject, or (as we may now say if we prefer the mode of expression) the mind thinks of objects in these various ways. Now, if we recognize a subject, we must admit that it has certain faculties; for a subject devoid of capacities would be a nonentity. And by a "faculty" we mean a capacity for an ultimate, irreducible, or unanalyzable mode of thinking of, or of being conscious of, objects; a capacity which we have to accept as a

²¹ Among them are McDougall (*op. cit.*, 201), Pillsbury (*op. cit.*, 341), and Yerkes (*op. cit.*, 293).

fact, and which we cannot hope to explain as a conjunction of more fundamental capacities. [p. 77.]

He is, in strict accordance with his program, faithful to the meaning of 'function' in the sense of 'activity'; and he is at liberty, as he does in one instance, to use the term 'faculty' as an equivalent for 'function':

He [Janet] assumes that the unity of the mind, as normally revealed in the direction of its activity towards one topic at any one moment, is conditioned by the exercise of a synthetic power or energy which is one of the fundamental functions or faculties of the mind. . . . [p. 201.]

In other places he equates 'function' with 'activity':

Now, besides abstracting from the active or functional aspect of consciousness, this method necessarily falsifies the facts by neglecting the actual changes and by breaking up the continuity of the whole stream of consciousness, both the continuity of the parts which make up the whole at any one moment of time and the continuity of the whole at successive moments. [p. 49.]

The one example of the meaning of 'function' with a biological reference, *i. e.*, our I-B-1, must be recorded:

All mental activity, then, normally issues in bodily movement; since only by promoting and guiding bodily movement can it fulfil its function. Conation is the application of mental energy to the direction and maintenance of the bodily activities by which the life of the race is furthered, and cognition governs bodily activity only through the medium of conation. [p. 105.]

It is obvious, then, that in this book we have a conception of mind similar to that of Baldwin: the mind acts much as a physiological organ; it does work; it acts out its own destiny. That this conception of acting is consistently carried out in the book is the judgment made as the result of the review.

MYERS (9). 'Function' is used only eleven times in this work; all usages, with one exception, are in connection with physiological processes, and all appear in the first (or 'text-book') part. One-half of the meanings come under our rubric I-A, and the remainder under II. Of those usages that have the sense of 'service' with other processes as an end (I-A), the following is a good example:

The absence of Purkinje's phenomenon and of the photochromatic interval at the fovea, when taken in conjunction with the absence of rods at the fovea, suggests that while the cones are concerned with ordinary vision under conditions of bright adaptation, it is the function of the rods to develop colourless sensations in the dark-adapted eye. [p. 83.]

On the psychological side, we have the following example:

There are always resistances inhibiting the carrying out of the 'determination,' and it is the function of the specific act of willing persistently to re-inforce the determination. [p. 332.]

An illustration of the usage with the meaning of 'activity,' (II), is given in the appended quotation:

Motor sensations are often called 'kinæsthetic' sensations. But, strictly speaking, the labyrinthine sensations are likewise kinæsthetic in function. [p. 60.]

In general, then, 'function' is not applied to psychical phenomena in this work. In physiological contexts it may mean either 'service' or 'activity.'

PILLSBURY (10). This author uses the term 'function' about sixty times and in a variety of meanings. Of most frequent occurrence is the meaning of 'activity' (II); much less often appears the meaning of 'service' in connection with other processes as ends (I-A); more seldom 'function,' in the sense of 'service' with the organism in its defensive relation to the environment as an end (I-B-1), is found; and once the word is used in connection with the organism in an assertive and developmental attitude toward its environment (I-B-2). Taken in order of classification, we have the following examples of the usage in the sense of 'service' in behalf of other processes (I-A):

One extremely important function of the lens is the accommodation or focussing of the eye. [p. 85.]

When certain of these separate functions are grouped in one way or to the accomplishment of one end, the process is perception; when grouped in another way, imagination; in a third, memory; and in a fourth, reasoning. When other functions are introduced and practical activities are controlled, the process is will. . . . In any event, what gives the name to the function in everyday life and in scientific usage are not the materials of which the mental state is composed or even the laws that are revealed in the operation, but the end that the function subserves. [p. 342.]

Used in connection with the survival of the organism (I-B-1), we find the following appearance of the term 'function':

The function of the nerve-cells in the colony may be regarded metaphorically as protective and connective. They compel the different parts to act together, and on the right occasion they enable the parts to respond to the external world. The nervous system enables the organism to act as a unit and not as a mass of separate organisms. [p. 20.]

As an illustration of the meaning given under I-B-2, that of 'service' to the organism in its endeavor to assert itself in a social environment, the following occurs:

The self may be approached from two distinct sides. One may ask what is in mind when one thinks 'I.' This question is on the same level as any other concerning the nature of a mental state; it is a question of structure. The other set of questions deal with the capabilities of the man; they ask what the self does in different relations, they raise problems of function. The one problem is of what the man himself appreciates as himself; the other asks what it is that makes an observer regard the man as continuously the same person, why he is trusted to act in a definite way, at all times. [p. 343.]

Finally, we come to the meaning which occurs most frequently in the book, that of 'activity' working in its own behalf (II):

The theoretical considerations may give any conclusion indifferently, and popular opinion seems to be much divided as to how far the effects of training may spread from the function actually exercised to other related functions. . . . On the one hand, the separate functions have been regarded as absolutely distinct; on the other, any training is assumed to be effective for all mental capacities. [p. 331.]

One can assert at present only that whether training in one act or in one field will be beneficial to other different acts or functions of the same sort depends upon whether the two functions have anything in common, and whether the common factor works in the same way in each of the activities in question. [p. 338.]

READ (11). In his preface this author frankly states his "belief that at the beginning of the study there is little value in the differentiation of psychology into such types as functional and structural, for both aspects of the description and explanation of mental life seem natural and harmonious to the beginner if the differentiation is ignored," and he goes on to say:

This book, accordingly, attempts to tell its "plain tale" regardless of such distinctions, yet makes use of the contributions of both types of psychological treatment. [p. iv.]

We shall not be surprised, therefore, to find no restraint placed upon the use of the term 'function.' The 40 odd occurrences of the word are, in fact, distributed over all four rubrics in our classification of meaning. Exactly one-half of the appearances of the word fall under our first classification (I-A), *i. e.*, 'function' means, in this case, 'service' in connection with other processes. Of this class, the following are illustrations:

We have indicated that the fibrous whitish courses have as their function the carrying of nervous impulses to and from the brain. The main function of the cell bodies forming the gray matter of the cord is to receive and send out again the various nervous currents. Certain reflex acts are controlled by these cell bodies. That is, some of the sensory currents are received by these cell bodies, and are immediately transferred to those motor courses which also have a functional connection with them. [p. 39.]

In the treatment of perception as well as that of sensation the main part of the story is taken up with the nature of these processes from the structural point of view. But their functions are important and should not be lost sight of. The first function of perception is its guidance of conduct by interpreting sense stimulation in terms of past experience. . . . The second function of perception is the part it plays in the further development of knowledge. It will be made clear as we proceed that memory, imagination, conception, judgment, and reasoning are developed from perception experiences. . . . The main function of sensations was seen to be their use in the development of perceptions. [pp. 130-1.]

Not a few references to 'function' as used in the sense of 'service' to the organism in defense of its environment, are found. Some of these are given:

The first feature of consciousness in our account, then, may be stated as follows: Consciousness, as a whole and in its various parts, has as its office or function the furthering of the life of the organism by means of the superior adjustment which it is able to bring about. [p. 19.]

Reference has already been made to the main function or use of sensations in the conscious life of the organism, namely, to furnish the material to be developed into perceptions and ideas for the guidance of the organism in making superior adjustments to the conditions of its life, conditions physical, social, and spiritual. [pp. 106-7.]

Both appearances of the term 'function' in connection with the meaning of 'service' to the organism in an assertive and developmental relation to its social environment (I-B-2) have already been quoted in illustration of the original classification.²² There remain, therefore, examples of the use of 'function' with the meaning of 'activity' for its own sake (II):

In addition to this there must be taken into the account the likelihood of *A* discharging into *B*, rather than into any of its other functional connections, this likelihood depending upon the frequency of their working together, their recency of connection, the intensity of the nervous impulse in their former functioning, the scarcity of other functional connections, and the general brain set or tension at the time. [p. 186.]

Popular speech is apt to be misleading when it makes use of such

²² *V.* page 103.

expressions as "the imagination" and "the power of imagination." These phrases are in keeping with a view of the mind no longer tenable. They are but abstract ways of speaking of the concrete images and of the mind's functioning in the way of imaging. [p. 224.]

Briefly, this book takes a decidedly biological point of view, for most of the usages of 'function' with the meaning of 'service' with some other process as an end, appear in biological contexts. The environment is always present in the background, and consciousness is a mechanism placed in the organism to enable the organism to adjust itself better to that environment.

STOUT (12). In this book the task of classification is simple because of the consistency in the usage of 'function.' With one exception, and that a doubtful one, all of the 21 appearances of the term come under class I-A, *viz.* that of 'service' in behalf of some other process or 'function.' To illustrate:

The function of the central nervous system is to control and combine the various processes which go on in different parts of the organism. [p. 26.]

But it [ideal construction] defeats its own end if it contradicts perceptual data; for it is ultimately founded on perception. Its materials are drawn through conceptual analysis from the concrete content of perceptual experience, and its function is to connect detached data of perception in a system through a process of conceptual synthesis. [p. 170.]

The one exception is probably our II, meaning 'activity for its own sake':

In grief there is general depression and disturbance of the vital functions, accompanied by cries, complaints, and movements which give relief by drawing off nervous energy, instead of specific motor attitudes in the way of practical adjustment to surrounding conditions. [p. 191.]

All 'functions' are therefore classifiable under the rubric of 'service' and further other processes in the organism.

THORNDIKE (13). Two meanings of 'function' appear in this work: 'service' in connection with other processes (I-A), and 'service' in connection with the maintenance of the organism in its environment (I-B-1). Examples of the first of these are:

The function of thoughts and feelings,—*i. e.*, the work they do, the service they perform, their share in the business of life,— is to influence actions. [p. 111.]

The function of a general notion or concept is to provide a constant mental sign for any one of the members of a group. [p. 116.]

Of somewhat less frequent occurrence is the second meaning of 'function,' our I-B-1:

The function of the permanence of mental changes in conscious memory and in unconscious habits of thought and action is, of course, to permit experiences to extend their influence into the future. Man and other animals as well would quickly succumb to the environment if the lessons it taught them in one hour were all lost during the next. [p. 115.]

The function of attention, is, first, to economize time and effort. The selective activity for which attention stands concentrates mental life upon the things, qualities, and conditions of moment to us and allows the rest of the universe to slip by without taking our time. It allows us to proportion the prominence any thing shall have in the mind to the importance it possesses for our welfare. [p. 118.]

In the comparatively short section of the book in which functional aspects of psychology are treated, we find, then, a biological tendency manifested, a tendency which pervades passages in which 'function' occurs in either of the two meanings noted, but, of course, more noticeably in connection with the meaning of 'service' in behalf of the organism (I-B-1).

TITCHENER (14). With the exception of 5 occurrences of the term 'function' with its mathematical meaning and one occurrence in the sense of our I-B-1, or 'service' with the organism in its defensive relation to the environment as an end, already quoted,²³ the remaining 17 appearances are classifiable under rubric II, as synonymous with 'activity' for its own sake. All occurrences have physiological bearing, *i. e.*, they do not refer to psychical phenomena. Examples of this predominant meaning of 'function' are:

Even, however, if we grant—and the point is more than doubtful—that contrast between feelings occurs, introspection shows that the sour quality is itself intensified; and the explanation is therefore to be sought in the sphere of sensation. The sweet-sensitive bulbs have been put out of function by adaptation to the sweet of the pudding, so that the mixed, sweet-sour stimulus affects only the sour-sensitive bulbs. [pp. 140-1.]

For the most part, the action of the heart and lungs is not accompanied by sensation. There are times, however,—after severe exertion, or during transient disturbance of function,—when the separate heart-beats are clearly sensed as a dull throbbing pressure: it is not easy to say whether the sensations are localised in the body wall or in the heart itself. [p. 189.]

The formulations of this law of dynamogenesis, as it is called, are usually sweeping, and do not always tally. In general, however, they carry two implications: that the reflex arc is the unit, the typical

²³ V. page 104.

unit of function, of the human nervous system; and that psychology must take account, not only of the afferent process which is correlated with sensation, but also of the efferent process which prompts the organism's response to stimulation. [p. 488.]

In the greater number of cases, then, 'function' appears to be used in this book in the sense of physiological 'activity' with, except for one case, no ulterior motive save its own activity.

YERKES (15). Out of the 15 occurrences of the term in this book, one has the sense of 'service' in behalf of the organism for defensive ends (I-B-1); the others are all classifiable under II as meaning 'activity' for its own sake. To cite examples in order of numerical classification:

It is the function of environment—the whole of which is education—so to develop each of us that the human type of will comes into existence beside instinct. Life is for every human being, first and foremost, a process of acquiring self-control. If the practices of education do not further this process with maximum efficiency, they are unsatisfactory. [p. 401.]

So much for the meaning of 'service' for the organism; a few instances of the usage with the meaning of 'activity' for its own end, our rubric II, are now in order:

It is the avowed business of physiology to study the functions of the living organism and of its parts or organs. It describes these functions in terms of energy, and, if it is consistent, never in any other terms. . . . Consciousness, however, is not energy, although it may prove to be a manifestation or accompaniment of certain energetic phenomena in the body. Hence it cannot be described in physiological terms. [p. 21.]

Where perfect clearness of mental content exists, the attention process is at its best. It is functioning at its maximum efficiency. Where vagueness exists, the attention process is functioning partially and incompletely. [p. 294.]

Anything that lessens the secretion of the salivary glands, the pancreas, the liver, the kidneys, soon brings about conditions whose accompaniment is disagreeableness of affection. These same conditions to be sure may tend to stimulate to greater activity the parts affected, but the fact remains that so long as function fails of its normal level, we continue to "feel badly" or to "feel uncomfortable." [p. 367.]

Manifestly, then, we discover a fairly consistent usage of the term 'function' in this book, and we find that in most instances it is used with physiological reference. It most commonly means 'activity' directed toward the purpose of acting.

Summary.—While the evaluation of the tendencies peculiar to each one of the several authors is not easy, a number of comparisons, based on the review of the textbooks, can be made. Certain important facts, indeed, are almost self-evident. In the first place, two psychologists, Myers and Titchener, very rarely or never use the word ‘function’ with reference to psychical phenomena, but only in connection with physiological facts. In the second place, usage of the term with decided biological significance occurs, in descending order of rank, in Angell, Judd, Read, Thorndike, and Calkins. In the third place, tendencies of attributing to mind manifestly active characteristics occur, with the exception of the two mentioned above, in all of the books reviewed, but the notion of mind in all these activities as an output or product of the brain and nervous system in general, in a fashion similar to the products of other bodily structures, occurs most noticeably, in descending order, in Ladd and Woodworth, Baldwin, and McDougall.

The most frequently used meaning of ‘function’ is that of ‘activity’ (II), in both physiological and psychological contexts, but with a greater frequency of occurrence with physiological reference; less often comes ‘service’ with other processes as ends (I-A); then still less often appears ‘service’ in behalf of the organism in its defensive relation toward its environment (I-B-1); and least often we find ‘service’ in behalf of the organism in its offensive relation to its environment (I-B-2).

The writers who are most consistent in the use of the term, *i. e.*, who use the term with practically only one meaning are Ladd and Woodworth (II), McDougall (II), Stout (I-A), Titchener (II), and Yerkes (II).

In almost all of these writers we find two factors immanent in the meaning of the term ‘function’ as used. There is, as is indicated in a previous paragraph, a majority vote on the use of the term ‘function’ in the sense of ‘activity.’ Not only is this true, but there is, in addition, an underlying tendency to instil into every other meaning of the word an active principle of some sort, a ‘doing,’ ‘performing,’ ‘fulfilling’ principle, which makes itself felt, if nowhere else, in the context and in the expressions chosen. The term ‘function,’ then, in whatever meaning in our classification it may occur, spells ‘activity’ of some kind. The other factor is that of ‘purpose’ or ‘end.’ Mental and bodily structures are described from a teleological aspect.

This may be conveyed in two ways: ‘function’ is usually

ascribed to a particular part of the physical or mental structure; or a setting of such a nature is definitely assigned to an activity that it becomes indispensable to other dependent activities. We may have, for example, a functioning peculiar to a given structure, such an activity as could be accomplished by no other part of the mind or body; or we may have added, explicitly or implicitly, the notion that that peculiar activity was purposefully assigned to that part of the mind or body, or, at any rate, that the total mind or body might suffer through the inactivity of any of its special parts. In the first case, there is an assignment of activity which fits into the general scheme of the whole; in the second case, the assignment of activity is definitely made toward the completion of a larger task, or for the purpose of making possible the perfection of another activity. To illustrate the distinction concretely, we may say,—to the frontal lobes of the brain the ‘function’ of association is ascribed: it would then be the duty of these lobes to act in the manner of *associating*, *i. e.*, in the established harmony of the organism that is their allotted job; now, in addition to simply acting, doing an assigned task, these lobes of the brain may associate psychical material for the purpose of furthering the function of memory within the organism: the end is, therefore, not the completion of an allotted task, but the completion of another dependent function. Teleology of one of these kinds is implied, then, in most usages of the term ‘function.’²⁴

The impression obtained from a detailed review of the literature, which introduces the beginner in many of our academic institutions to the science of psychology, simmers down, then, to this: In a large number of the books,—the larger number of the group selected,—whatever be the dominating standpoint of the author, mind is still considered as an active and purposeful ‘organism’ of the individual. It is also to be noted that very few of the writers considered were consistent in the use of the term ‘function’ with a set meaning. It is to be hoped, consequently, that some understanding as to exactly what is implied in the term will be reached; at least it would be of advantage to the student to know what, in a given case, the author means when he speaks of ‘functions’ of the mind

²⁴ These underlying factors, of ‘activity’ and ‘purpose,’ came to light as the result of the empirical analysis of the textbooks. We are aware of the fact that many psychologists, the books of some of whom were included in our review, are inclined, as a rule, to account for these factors in a manner different from our own. It is our intention to treat this broader aspect of the problem in a later article.